

Appendix B: Property #5 – 1904 Forest



*Christy
Kawta*

STATE OF IOWA

THOMAS J. VILSACK, GOVERNOR
SALLY J. PEDERSON, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
JEFFREY R. VONK, DIRECTOR

November 18, 2004

Mr. Jim Elza, Director
Polk County Planning & Development
5885 NE 14th Street
Des Moines, IA 50313

SUBJECT: Des Moines UST Fields Site Check Report --
Former Gas Station property at 1904 Forest Avenue in Des Moines, Iowa

Dear Mr. Elza:

The department received a Site Check Report (environmental investigation) for the above-referenced site. The site check was funded through an EPA grant and completed by Barker Lemar Engineering as part of the Des Moines UST Fields project (a description of the project was provided to you in our January 20, 2004 letter). A gas station was reportedly in operation at this site from the 1930's through the 1950's. The purpose of the investigation was to determine if petroleum contamination is present in soil or groundwater due to the historical operation of a service station on the property.

Soil contaminant concentrations were below the action limits established by this department (see 567—135.14(455B) Iowa Administrative Code). Minimal levels of Total Extractable Hydrocarbons as waste oil (TEH-wo) were detected in soil; however, there is no action level established for TEH-wo in soil. Contamination was not detected in any of the groundwater samples. Therefore, no further action will be required at this time. We will update our records to indicate a petroleum release was not verified.

For your convenience, we are providing you a copy of the site check report. Additional information concerning the Des Moines UST Fields project is available for public viewing at the DNR Records Center, Wallace State Office Building, 502 East Ninth Street, Des Moines, Iowa. You are welcome to review these files during regular business hours (8 a.m. - 4:30 p.m. Monday through Friday), or to request copies of the material at a fee of \$0.40 per page.

Please contact me at 515/281-8011, if you have additional questions or we may be of further assistance.

Sincerely,

ELAINE R. DOUSKEY
ENVIRONMENTAL SPECIALIST
UNDERGROUND STORAGE TANK SECTION

c: Field Office 5
Christy Jaworski, 1801 Industrial Circle West Des Moines, IA 50265
Ellen Walkowiak, Economic Development, City of Des Moines, 400 E. 1st Street, Des Moines,
IA 50309

USTFsitechk_1904Forest.doc

**Summary of Activities
Iowa USTfields Project
City of Des Moines
Property Owner – Polk County
1904 Forest Ave.
Des Moines, IA
Project No. IADNR 001
April 12, 2004**

1801 Industrial Circle, West Des Moines, Iowa 50265
(515) 256-8814 Fax (515) 256-0152

Summary of Activities
Iowa USTfields Project – City of Des Moines
Property Owner - Polk County
1904 Forest Ave.
Des Moines, IA
April 12, 2004

1.0 INTRODUCTION

BARKER LEMAR ENGINEERING CONSULTANTS was contracted by the Iowa Department of Natural Resources in partnership with the City of Des Moines, the EPA, and the Iowa Underground Storage Tank Financial Responsibility Program to assess and clean up contaminated sites within the pilot project area with the ultimate goal of redevelopment. The sites are located in the Drake Neighborhood area within the City of Des Moines.

Initial activities included identifying sites where potential petroleum contamination may be located which could hinder future development activities. The potential petroleum contaminated sites were identified by a search of Polk City Directories, Sanborn Maps, review of IDNR underground storage tank and leaking underground storage tank records, and review of the Fire Marshall's records.

The site at 1904 Forest Avenue is currently owned by Polk County and reportedly operated as a petroleum facility from the 1930's through the 1950's.

2.0 RECORD REVIEW

Polk City Directories were reviewed at the Des Moines Library. The Directory was reviewed in approximately 5 year intervals. Information in the Directory indicated the site was a Texaco Service Station in 1930 and 1935, Cook & Coon Service Station in 1940, Griffith's Tudor (filling station in 1946 and Channing Tiernan (filling station) in 1950. The 1922 Sanborn map showed a gas station located on the site and two tanks were

reportedly located on the east side of the property approximately 40 feet south of Forest Avenue and 35 feet west of 19th Street.

According to Matt Porter with the Fire Department tanks were removed from this location in 2002. It is believed these are orphan tanks found by Polk County in June 2002. **BARKER LEMAR** responded when the tanks were found at the site and conducted sampling activities. These tanks were located near the northeast portion of the property identified as 1918 Forest (adjacent to the west of 1904 Forest). These tanks were approximately 580 and 230 gallons in size. The location of these tanks does not correspond to the location of the tanks identified on the 1922 Sanborn map for 1904 Forest.

Site visual observations did not indicate any evidence of underground storage tanks.

3.0 SOIL AND GROUNDWATER RESULTS

BARKER LEMAR personnel were on site February 19, 2004, to complete soil and groundwater sampling. Three soil borings were installed with a Geoprobe and converted to temporary monitoring wells. Logs are included in Appendix A. Boring B-1 was placed in the area identified as the potential former tank location by the Sanborn information. The other borings were placed in order to triangulate the site and determine groundwater flow. Based on the three temporary monitoring wells the flow appears to be toward the south. Figure 1 is a site map showing the location of the former UST area based on the Sanborn information and the location of the borings/temporary monitoring wells.

Soil samples were screened approximately every two feet with a photoionization detector (PID). A soil sample was collected from each soil boring at the location of the highest PID, or if the PID did not detect any contaminant, at the assumed groundwater/soil interface. Samples were submitted to Keystone Laboratories in Newton, Iowa for BTEX/MTBE analysis by Iowa Method OA-1 by GC/MS and for total extractable hydrocarbon analysis by Iowa Method OA-2. Copies of the analytical results and chain of custody forms are located in Appendix B.

Temporary wells were installed at the boring locations. Wells were purged of three volumes or bailed dry and groundwater samples were collected for analysis. Samples were submitted to Keystone Laboratories in Newton, Iowa for BTEX/MTBE analysis by Iowa Method OA-1 by GC/MS and for total extractable hydrocarbon analysis by Iowa Method OA-2. Sample results are included in the following table. Soil results indicate detectable concentrations of total extractable hydrocarbons as waste oil in all three soil borings. Concentrations are below IDNR action levels. All analyzed compounds are below detection limits in the water samples.

Table 1
Analytical Results
Soil Sampling

Analyte	Units	Action Level	B-1 11-13'	B-2 3-5'	B-3 11-13'
Methyl-tert-Butyl Ether (MTBE)	mg/kg	NE	<0.010	<0.010	<0.010
Benzene	mg/kg	0.54	<.005	<.005	<.005
Toluene	mg/kg	42	<.005	<.005	<.005
Ethylbenzene	mg/kg	15	<.005	<.005	<.005
Xylenes, Total	mg/kg	NE	<0.010	<0.010	<0.010
TEH, as #2 diesel fuel	mg/kg	3800	<5	<5	<5
TEH, as gasoline	mg/kg	NE	<5	<5	<5
TEH, as waste oil	mg/kg	NE	6	14	5

Table 2
Analytical Results
Groundwater Sampling

Analyte	Units	Action Level	B-1	B-2	B-3
Methyl-tert-Butyl Ether (MTBE)	ug/L	NA	<1	<1	<1
Benzene	ug/L	250	<1	<1	<1
Toluene	ug/L	1000	<1	<1	<1
Ethylbenzene	ug/L	700	<1	<1	<1
Xylenes, Total	ug/L	1000	<2	<2	<2
TEH, as #2 diesel fuel	ug/L	1200	<100	<100	<100
TEH, as waste oil	ug/L	400	<100	<100	<100

4.0 CONCLUSION

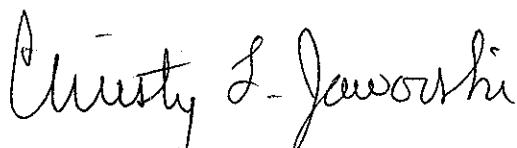
BARKER LEMAR conducted assessment activities to determine potential petroleum contamination for property owned by Polk County at 1904 Forest Avenue in Des Moines, Iowa. Results of the activities did not locate any underground storage tanks. Soil sampling did not indicate any detectable concentrations of BTEX or MTBE present in the soil. Total extractable hydrocarbons were present as waste oil in all three soil samples but concentrations detected were below IDNR target levels.

Groundwater sampling did not indicate any detectable concentrations of BTEX, MTBE or total extractable hydrocarbons present.

We have appreciated being of service to you on this project. If you have any questions concerning this submittal, please do not hesitate to contact our office at 515-256-8814.

Sincerely,

BARKER LEMAR ENGINEERING CONSULTANTS



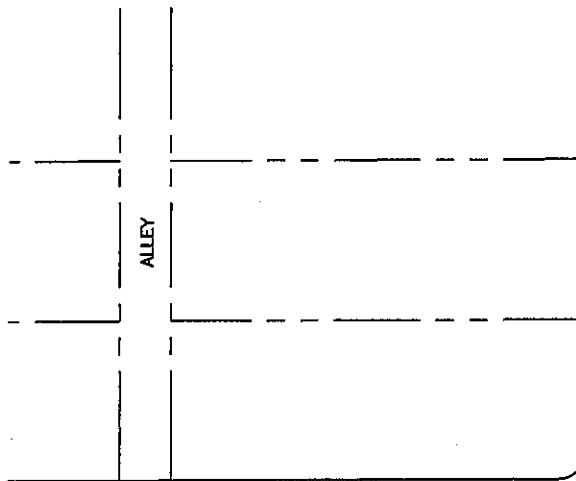
Christy L. Jaworski
Senior Project Manager



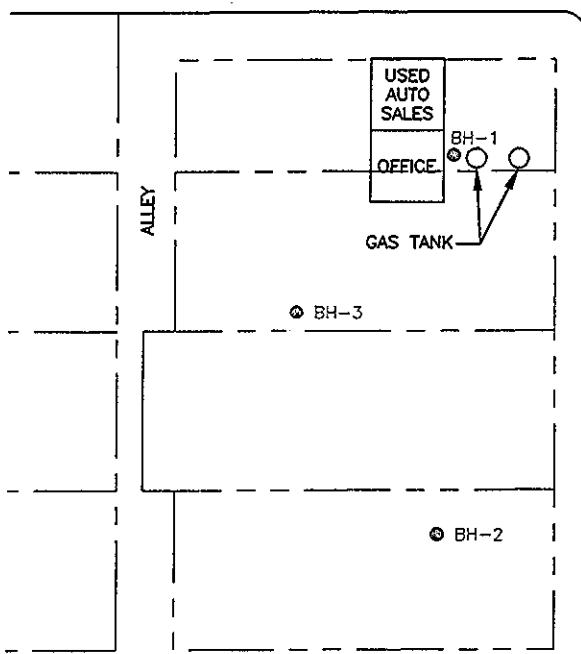
Anita Maher-Lewis
Regional Manager

FIGURE 1

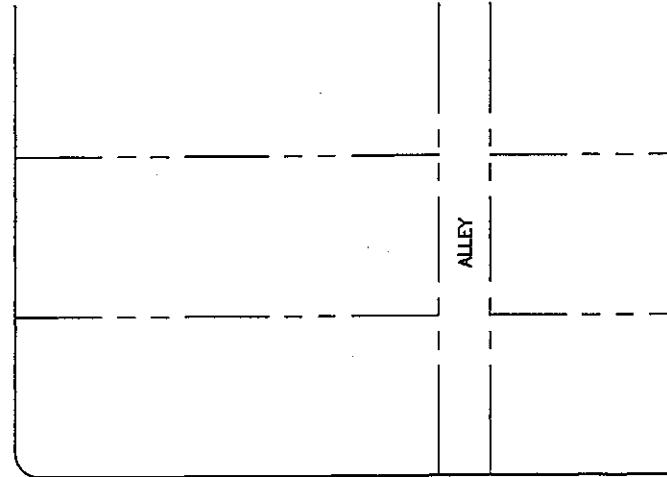
SITE PLAN MAP



FOREST AVENUE



19TH STREET



LEGEND



APPROXIMATE LOCATION
OF BOREHOLE

PROPERTY BOUNDARY



SCALE

0 60 FT.

SITE MAP
BOREHOLE LOCATIONS
1904 FOREST AVE
PROJECT NO. IADNR 001
DRAWING DATE: MARCH, 2004

BARKER LEMAR

ENGINEERING CONSULTANTS

1801 Industrial Circle - West Des Moines, Iowa - 50265
Phone: 515 256 8814 - Fax: 515 256 0152 - www.barkerlemar.com

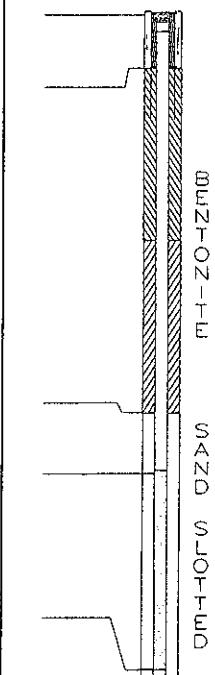
FIGURE

1

APPENDIX A

Boring/Monitoring Well Logs

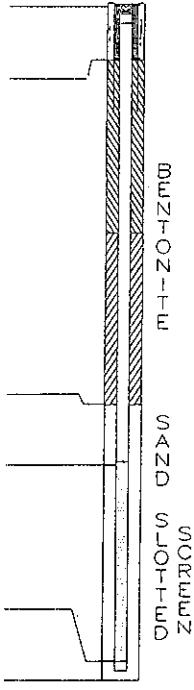
MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: B-1		Facility Name: Polk County Property		Facility Street Address: 1904 Forest Avenue, Des Moines, IA				
Boring Depth (ft) X Diameter (in): 19 0' X 2"				Drilling Method: Geoprobe				
Certified Well Contractor Name: Kevin Sperslage Certification Number: 40530				Logged by: John Wyciskalla				
Ground Surface Elevation (ASL): 99.0		Top of Casing Elevation (ASL): NA						
Date: 2/18/2004 Start Time:	Date: 2/18/2004 End Time:	UST Number: NA		LUST Number: NA				
Depth (feet)	Well Construction Details	Sample Depth (feet)	Sample No.	Type*	Field Screening Results (PID / FID)	Rock Formations, Soil, Color and Classifications Observations (moisture, odor, etc.) First column for USCS		
0.0		3-5' 5-7' 7-9' 9-11' *11-13' 13-15' 15-17' 17-19'	1 2 3 4 5 6 7 8	SS SS SS SS SS SS SS SS	0 0 0 0 0 0 0 0	CL CL CL CL CL CL CL CL	1.0-5.0 - Gray/Brown Sandy Lean Clay 5.0-11.0 -Gray/Brown Lean Clay with Gravel 11.0-13.0 – Sandy Brown/Gray Lean Clay with Sand 13- 0-17.0 Gray Lean Clay, Iron Staining 17.0-19.0 Gray Lean Clay 19.0 End of Boring	
1.0								
7.0								
9.0								
19.0								
19.0								

* Sample collected for laboratory analysis SS – Split Spoon

Observations	Date:				
Water Levels (ASL)	Level:				
Static Water Level Symbol (v)	Time:				

MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: B-2		Facility Name: Polk County Property		Facility Street Address: 1904 Forest Avenue, Des Moines, IA					
Boring Depth (ft) X Diameter (in): 17.0' X 2"				Drilling Method: Geoprobe					
Certified Well Contractor Name: Kevin Sperfslage Certification Number: 40530				Logged by: John Wyciskalla					
Ground Surface Elevation (ASL): 97.39		Top of Casing Elevation (ASL): NA							
Date: 2/19/2004	Date: 2/19/2004	UST Number: NA			LUST Number: NA				
Start Time:	End Time:								
Depth (feet)	Well Construction Details	Sample Depth (feet)	Sample No	Type*	Field Screening Results (PID / FID)	Rock Formations, Soil Color and Classifications. Observations (moisture, odor, etc) First column for USCS			
0.0		1-3' *3-5'	1 2	SS SS	0 0	CL	1.0-5.0 – Dark Brown Silty Clay		
1.0		5-7' 7-9'	3 4	SS SS	0 0	CL	5.0-7.0 –Dark Brown Clay with Gravel		
		9-11'	5	SS	0	CL	7.0-15.0 – Brown/Gray Clay with Sand		
		11-13'	6	SS	0	CL	15.0-17.0 Gray Clay with Sand		
		13-15'	7	SS	0				
		15-17'	8	SS	0				
5.0									
7.0							17.0 End of Boring		
17.0									
17.0									

* Sample collected for laboratory analysis SS – Split Spoon

Observations	Date:	2/19/04				
Water Levels (ASL)	Level:	5.4				
Static Water Level Symbol (v)	Time:					

MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: B-3		Facility Name: Polk County Property		Facility Street Address: 1904 Forest Avenue, Des Moines, IA			
Boring Depth (ft) X Diameter (in): 15.0' X 1.75"				Drilling Method: Geoprobe			
Certified Well Contractor Name: Kevin Sperfslage Certification Number: 40530				Logged by: John Wyciskalla			
Ground Surface Elevation (ASL): 98.62		Top of Casing Elevation (ASL): NA					
Date: 2/19/2004	Date: 2/19/2004		UST Number: NA			LUST Number: NA	
Start Time:	End Time:						
Depth (feet)	Well Construction Details		Sample Depth (feet)	Sample No. Type*		Field Screening Results (PID / FID)	Rock Formations, Soil, Color and Classifications Observations (moisture, odor, etc.) First column for USCS
0.0			1-3'	1	SS	0	CL 1.0-3.0 – Brown to Very Dark Brown Silty Clay
1.0			3-5'	2	SS	0	NR 3.0-5.0 – No Recovery
8.0			5-7'	3	SS	0	CL 5.0-8.0 – Gray-Tan Silty Clay
10.0			7-9'	4	SS	0	CL 8.0-11.0 – Brown-Gray Sandy Clay
15.0			9-11'	5	SS	0	CL 11.0-15.0 – Gray Clay with Gravel and Sand
15.0			*11-13'	6	SS	0	
15.0			13-15'	7	SS	0	
							15.0 End of Boring

* Sample collected for laboratory analysis SS – Split Spoon Sample

Observations	Date:	2/19/04				
Water Levels (ASL)	Level:	13.2				
Static Water Level Symbol (v)	Time:					

APPENDIX B

Laboratory Analytical Results

Accreditations:
Iowa DNR: 095
New Jersey DEP: IA001
Kansas DHE: E-10287

ANALYTICAL REPORT

March 08, 2004

Page 1 of 6

Work Order: 14B0844

Report To

Christy Jaworski
Barker-Lemar Associates
1801 Industrial Circle
Des Moines, IA 50315

Work Order Information

Date Received: 02/23/2004 12:50PM
Collector: Wyciskalla, J.
Phone: 515-256-8814
PO Number:

Project :UST-Iowa

Project Number: IADNR

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
14B0844-01 B-1				Matrix: Water		Collected: 02/20/04 00:00	
<i>Determination of Volatile Petroleum Hydrocarbons</i>							
Benzene	<1 ug/l	1	1B42616	OA-1 (GC/MS)	JRF	02/25/04 17:54	
Toluene	<1 ug/l	1	1B42616	OA-1 (GC/MS)	JRF	02/25/04 17:54	
Ethylbenzene	<1 ug/l	1	1B42616	OA-1 (GC/MS)	JRF	02/25/04 17:54	
Xylenes, total	<2 ug/l	2	1B42616	OA-1 (GC/MS)	JRF	02/25/04 17:54	
Methyl-t-butyl Ether (MIBE)	<1 ug/l	1	1B42616	OA-1 (GC/MS)	JRF	02/25/04 17:54	
Ethyl-tert-Butyl Ether (ETBE)	<2 ug/l	2	1B42616	OA-1 (GC/MS)	JRF	02/25/04 17:54	
Di-iso-Propyl Ether (DIPE)	<2 ug/l	2	1B42616	OA-1 (GC/MS)	JRF	02/25/04 17:54	
tert-Amyl Methyl Ether (TAME)	<2 ug/l	2	1B42616	OA-1 (GC/MS)	JRF	02/25/04 17:54	
tert-Butyl Alcohol (TBA)	<50 ug/l	50	1B42616	OA-1 (GC/MS)	JRF	02/25/04 17:54	
Surrogate 4-Bromofluorobenzene	102 %			81-124			
<i>Determination of Extractable Petroleum Hydrocarbons</i>							
IEH, as gasoline	<0.1 mg/l	0.1	1B42710	Iowa OA-2	SMG	03/05/04 23:09	
IEH, as #2 diesel fuel	<0.1 mg/l	0.1	1B42710	Iowa OA-2	SMG	03/05/04 23:09	
IEH, as waste oil	<0.1 mg/l	0.1	1B42710	Iowa OA-2	SMG	03/05/04 23:09	
Total Extractable Hydrocarbons	<0.1 mg/l	0.1	1B42710	Iowa OA-2	SMG	03/05/04 23:09	
Surrogate Pentacosane	87.2 %			70-130			

14B0844-02 B-2				Matrix: Water		Collected: 02/20/04 00:00
<i>Determination of Volatile Petroleum Hydrocarbons</i>						
Benzene	<1 ug/l	1	1B42616	OA-1 (GC/MS)	JRF	02/25/04 18:34
Toluene	<1 ug/l	1	1B42616	OA-1 (GC/MS)	JRF	02/25/04 18:34
Ethylbenzene	<1 ug/l	1	1B42616	OA-1 (GC/MS)	JRF	02/25/04 18:34
Xylenes, total	<2 ug/l	2	1B42616	OA-1 (GC/MS)	JRF	02/25/04 18:34
Methyl-t-butyl Ether (MIBE)	<1 ug/l	1	1B42616	OA-1 (GC/MS)	JRF	02/25/04 18:34
Ethyl-tert-Butyl Ether (ETBE)	<2 ug/l	2	1B42616	OA-1 (GC/MS)	JRF	02/25/04 18:34
Di-iso-Propyl Ether (DIPE)	<2 ug/l	2	1B42616	OA-1 (GC/MS)	JRF	02/25/04 18:34
tert-Amyl Methyl Ether (TAME)	<2 ug/l	2	1B42616	OA-1 (GC/MS)	JRF	02/25/04 18:34
tert-Butyl Alcohol (TBA)	<50 ug/l	50	1B42616	OA-1 (GC/MS)	JRF	02/25/04 18:34
Surrogate 4-Bromofluorobenzene	100 %			81-124		
<i>Determination of Extractable Petroleum Hydrocarbons</i>						
IEH, as gasoline	<0.1 mg/l	0.1	1B42710	Iowa OA-2	SMG	03/05/04 23:58

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted.
MRL = Method Reporting Limit.

Barker-Lemar Associates
1801 Industrial Circle
Des Moines, IA 50315

March 08, 2004

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Work Order: 14B0844

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
14B0844-02 B-2				Matrix:Water		Collected:	02/20/04 00:00
<i>Determination of Extractable Petroleum Hydrocarbons</i>							
IEH, as #2 diesel fuel	<0.1 mg/l	0.1	1B42710	Iowa OA-2	SMG	03/05/04 23:58	
IEH, as waste oil	<0.1 mg/l	0.1	1B42710	Iowa OA-2	SMG	03/05/04 23:58	
Total Extractable Hydrocarbons	<0.1 mg/l	0.1	1B42710	Iowa OA-2	SMG	03/05/04 23:58	
Surrogate Pentacosane	78.3 %			70-130	SMG	03/05/04 23:58	
14B0844-03 B-3				Matrix:Water		Collected:	02/20/04 00:00
<i>Determination of Volatile Petroleum Hydrocarbons</i>							
Benzene	<1 ug/l	1	1B42616	OA-1 (GC/MS)	JRF	02/25/04 19:13	
Toluene	<1 ug/l	1	1B42616	OA-1 (GC/MS)	JRF	02/25/04 19:13	
Ethylbenzene	<1 ug/l	1	1B42616	OA-1 (GC/MS)	JRF	02/25/04 19:13	
Xylenes, total	<2 ug/l	2	1B42616	OA-1 (GC/MS)	JRF	02/25/04 19:13	
Methyl-t-butyl Ether (MIBE)	<1 ug/l	1	1B42616	OA-1 (GC/MS)	JRF	02/25/04 19:13	
Ethyl-tert-Butyl Ether (EIBE)	<2 ug/l	2	1B42616	OA-1 (GC/MS)	JRF	02/25/04 19:13	
Di-iso-Propyl Ether (DIPE)	<2 ug/l	2	1B42616	OA-1 (GC/MS)	JRF	02/25/04 19:13	
tert-Amyl Methyl Ether (TAME)	<2 ug/l	2	1B42616	OA-1 (GC/MS)	JRF	02/25/04 19:13	
tert-Butyl Alcohol (TBA)	<50 ug/l	50	1B42616	OA-1 (GC/MS)	JRF	02/25/04 19:13	
Surrogate 4-Bromofluorobenzene	104 %			81-124	JRF	02/25/04 19:13	
<i>Determination of Extractable Petroleum Hydrocarbons</i>							
IEH, as gasoline	<0.1 mg/l	0.1	1B42710	Iowa OA-2	SMG	03/06/04 0:47	
IEH, as #2 diesel fuel	<0.1 mg/l	0.1	1B42710	Iowa OA-2	SMG	03/06/04 0:47	
IEH, as waste oil	<0.1 mg/l	0.1	1B42710	Iowa OA-2	SMG	03/06/04 0:47	
Total Extractable Hydrocarbons	<0.1 mg/l	0.1	1B42710	Iowa OA-2	SMG	03/06/04 0:47	
Surrogate Pentacosane	85.1 %			70-130	SMG	03/06/04 0:47	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted.
MRL = Method Reporting Limit.

Barker-Lemar Associates
1801 Industrial Circle
Des Moines, IA 50315

March 08, 2004
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Work Order: 14B0844

Determination of Volatile Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1B42616 - EPA 5030B

Blank (1B42616-BLK1) Prepared & Analyzed: 02/25/04

Benzene	ND	1	ug/l							
Toluene	ND	1	"							
Ethylbenzene	ND	1	"							
Xylenes, total	ND	2	"							
Methyl-t-butyl Ether (MIBE)	ND	1	"							
Ethyl-tert-Butyl Ether (EIBE)	ND	2	"							
Di-iso-Propyl Ether (DIPE)	ND	2	"							
tert-Amyl Methyl Ether (TAME)	ND	2	"							
tert-Butyl Alcohol (TBA)	ND	50	"							
<i>Surrogate</i> 4-Bromofluorobenzene	51.1		"	50.0		102	81-124			

LCS (1B42616-BS1) Prepared: 02/25/04 Analyzed: 02/26/04

Benzene	47.8	1	ug/l	58.5		81.7	79-135			
Toluene	68.7	1	"	62.5		110	68-141			
Ethylbenzene	58.8	1	"	59.0		99.7	84-135			
Xylenes, total	124.3	2	"	117.5		106	85-132			
Methyl-t-butyl Ether (MIBE)	138.8	1	"	159.0		87.3	65-135			
<i>Surrogate</i> 4-Bromofluorobenzene	49.8		"	50.0		99.6	81-124			

Calibration Check (1B42616-CCV1) Prepared & Analyzed: 02/25/04

Benzene	68.1	1	ug/l	81.0		84.1	70-130			
Toluene	71.4	1	"	66.5		107	70-130			
Ethylbenzene	69.1	1	"	69.5		99.4	70-130			
Xylenes, total	157.9	2	"	154.5		102	70-130			
Methyl-t-butyl Ether (MIBE)	62.6	1	"	68.5		91.4	70-130			
Ethyl-tert-Butyl Ether (EIBE)	62.2	2	"	67.0		92.8	70-130			
Di-iso-Propyl Ether (DIPE)	57.5	2	"	63.0		91.3	70-130			
tert-Amyl Methyl Ether (TAME)	45.2	2	"	58.5		77.3	70-130			
tert-Butyl Alcohol (IBA)	926.2	50	"	995.0		93.1	70-130			
<i>Surrogate</i> 4-Bromofluorobenzene	51.7		"	50.0		103	81-124			

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MRL = Method Reporting Limit

Barker-Lemar Associates
1801 Industrial Circle
Des Moines, IA 50315

March 08, 2004
Page 4 of 6

Work Order: 14B0844

Determination of Volatile Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1B42616 - EPA 5030B

Matrix Spike (1B42616-MS1) Source: 14B0863-06RE1 Prepared: 02/25/04 Analyzed: 02/26/04

Benzene	4897	100	ug/l	5850	ND	83.7	63-138			
Toluene	6098	100	"	6250	ND	97.6	72-128			
Ethylbenzene	6114	100	"	5900	186	100	69-139			
Xylenes, total	12570	200	"	11750	215	105	71-136			
Methyl-t-butyl Ether (MIBE)	13440	100	"	15900	ND	84.5	65-127			
<i>Surrogate</i> 4-Bromofluorobenzene	50.6		"	50.0		101	81-124			

Matrix Spike Dup (1B42616-MSD1) Source: 14B0863-06RE1 Prepared: 02/25/04 Analyzed: 02/26/04

Benzene	4738	100	ug/l	5850	ND	81.0	63-138	3.30	12	
Toluene	6022	100	"	6250	ND	96.4	72-128	1.25	21	
Ethylbenzene	6131	100	"	5900	186	101	69-139	0.278	12	
Xylenes, total	12580	200	"	11750	215	105	71-136	0.0795	10	
Methyl-t-butyl Ether (MIBE)	13640	100	"	15900	ND	85.8	65-127	1.48	18	
<i>Surrogate</i> 4-Bromofluorobenzene	51.0		"	50.0		102	81-124			

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MRL = Method Reporting Limit

Barker-Lemar Associates
1801 Industrial Circle
Des Moines, IA 50315

March 08, 2004

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Work Order: 14B0844

Determination of Extractable Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1B42710 - 3510C OA-2 Sep Fnl

Blank (1B42710-BLK1) Prepared: 02/26/04 Analyzed: 03/05/04

TEH, as gasoline	ND	0 1	mg/l
IEH, as #2 diesel fuel	ND	0 1	"
IEH, as waste oil	ND	0 1	"
Total Extractable Hydrocarbons	ND	0 1	"

Surrogate Pentacosane	0 0447	"	0 0498	89 8	70-130
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LCS (1B42710-BS1) Prepared: 02/26/04 Analyzed: 03/06/04

TEH, as #2 diesel fuel	9 27	0 1	mg/l	10 00	92 7	65-110
Surrogate Pentacosane	0 0497	"	0 0498	99 8	70-130	

LCS Dup (1B42710-BSD1) Prepared: 02/26/04 Analyzed: 03/06/04

TEH, as #2 diesel fuel	9 18	0 1	mg/l	10 00	91 8	65-110	0 976	20
Surrogate Pentacosane	0 0501	"	0 0498	101	70-130			

Calibration Check (1B42710-CCV1) Prepared: 02/26/04 Analyzed: 03/05/04

IEH, as gasoline	2246	mg/l	2050	110	85-115
IEH, as #2 diesel fuel	2218	"	2100	106	85-115
IEH, as waste oil	2054	"	2030	101	85-115
Surrogate Pentacosane	45 22	"	49 80	90 8	70-130

Calibration Check (1B42710-CCV2) Prepared: 02/26/04 Analyzed: 03/06/04

TEH, as gasoline	2176	mg/l	2050	106	85-115
IEH, as #2 diesel fuel	2199	"	2100	105	85-115
IEH, as waste oil	1832	"	2030	90 2	85-115
Surrogate Pentacosane	45 64	"	49 80	91 6	70-130

Reference (1B42710-SRM1) Prepared: 02/26/04 Analyzed: 03/06/04

TEH, as #2 diesel fuel	5176	100	mg/l	4752	109	61-110
Surrogate Pentacosane	50 12	"	49 80	101	70-130	

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

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ACL

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Des Moines, IA 50315

March 08, 2004

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Work Order: 14B0844

End of Report

A handwritten signature in black ink that reads "Jeffrey King".

Keystone Laboratories, Inc.
Jeffrey King, Ph.D
Laboratory Director

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Quantitation_Report

Data File : G:\HPCHEM\2\DATA\030504A2\016F0201.D Vial: 16
Acq On : 05 Mar 2004 11:09 PM Operator: SMG
Sample : 14B0844-01 Inst: GC #2
Misc : Multiplr: 1.00

IntFile : HYDRO.E

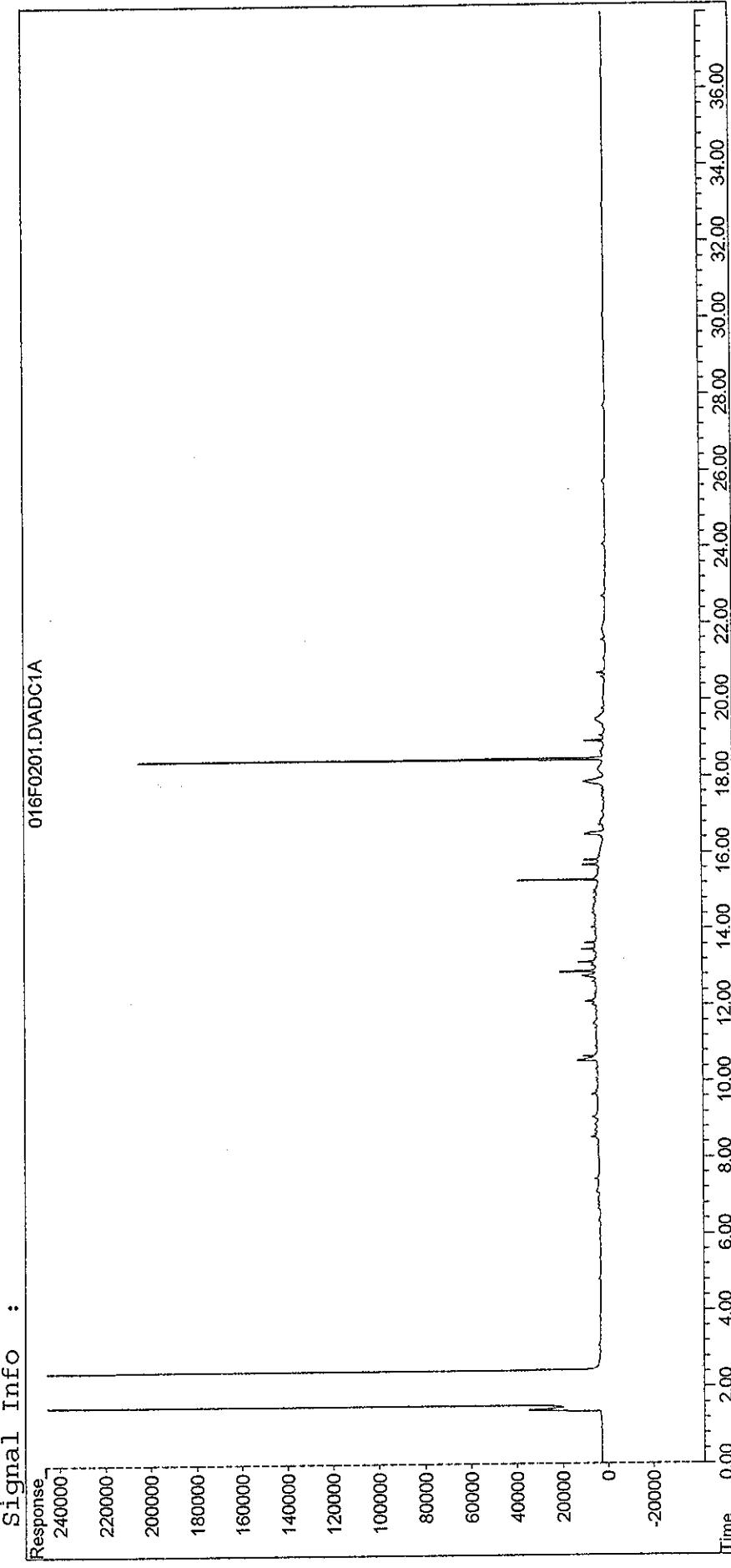
Quant Time: Mar 6 11:37 19104 Quant Results File: F022304.RES

Quant Method : G:\HPCHEM\2\METHODS\F022304.M (Chemstation Integrator)
Title : 8015-500/OA-2 Method
Last Update : Tue Feb 24 08:57:51 2004
Response via : Multiple Level Calibration
DataAcq Meth : DIESEL.MTH

Volume Inj. :

Signal Phase :

Signal Info :



Quantitation_Report

Data File : G:\HPCHEM\2\DATA\030504A2\017F0201.D Vial: 17
Acq On : 05 Mar 2004 11:58 PM Operator: SMG
Sample : 14B0844-02 Inst: GC #2
Misc : Multiplr: 1.00

IntFile : HYDRO.E

Quant Time: Mar 6 11:37 19104 Quant Results File: F022304.RES

Quant Method : G:\HPCHEM\2\METHODS\F022304.M (Chemstation Integrator)

Title : 8015-500/OA-2 Method

Last Update : Tue Feb 24 08:57:51 2004

Response via : Multiple Level Calibration

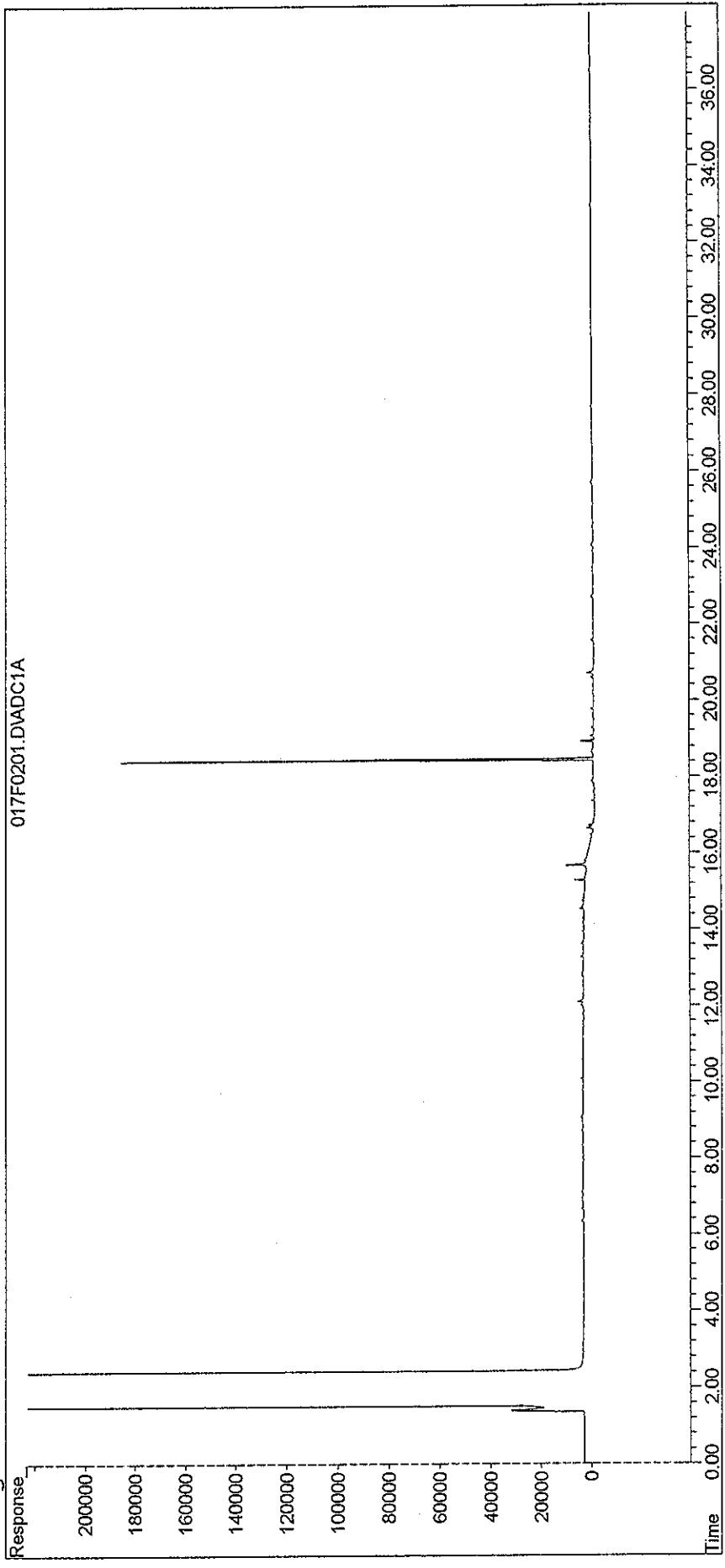
DataAcq Meth : DIESEL.MTH

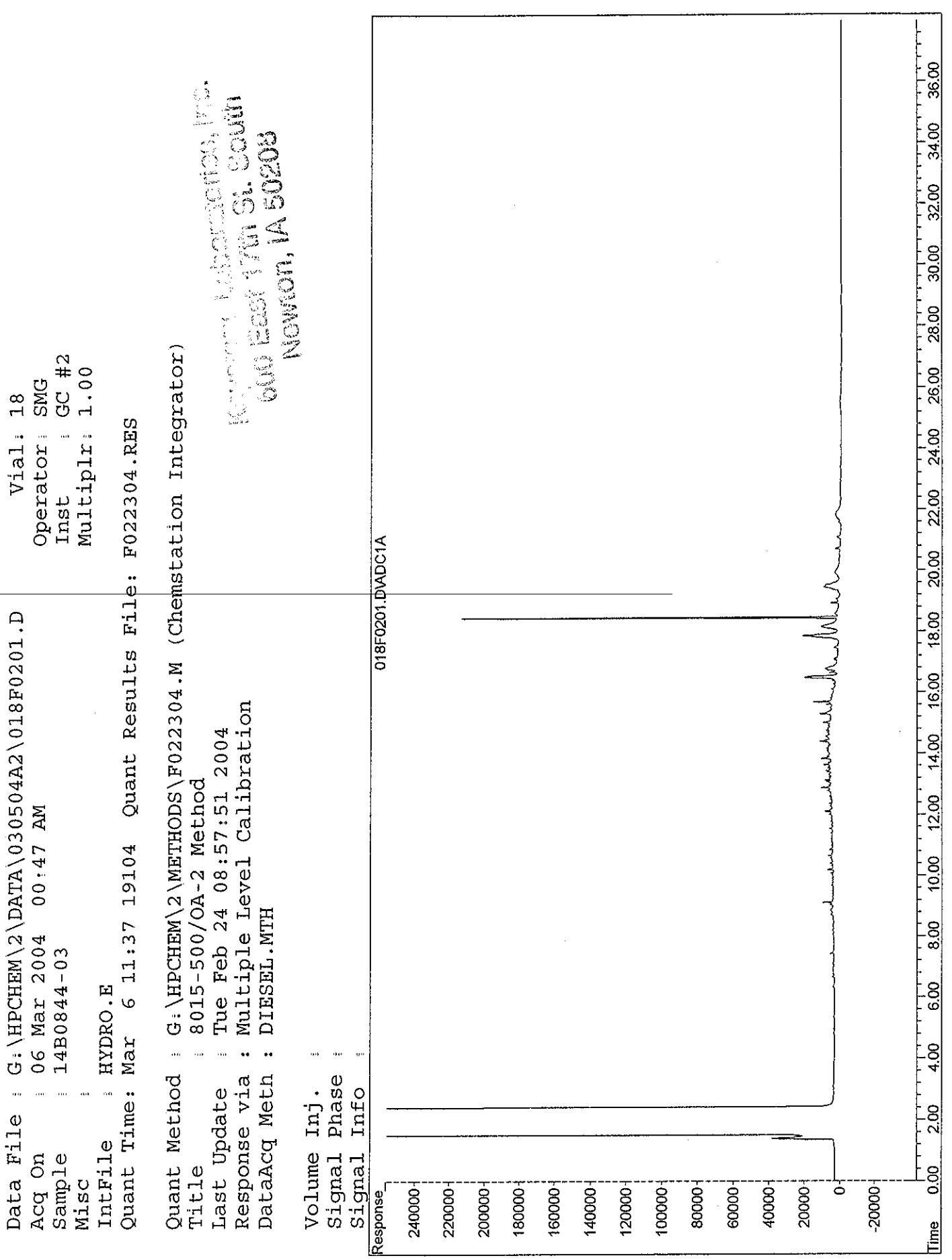
Volume Inj. :

Signal Phase :

Signal Info :
Response:

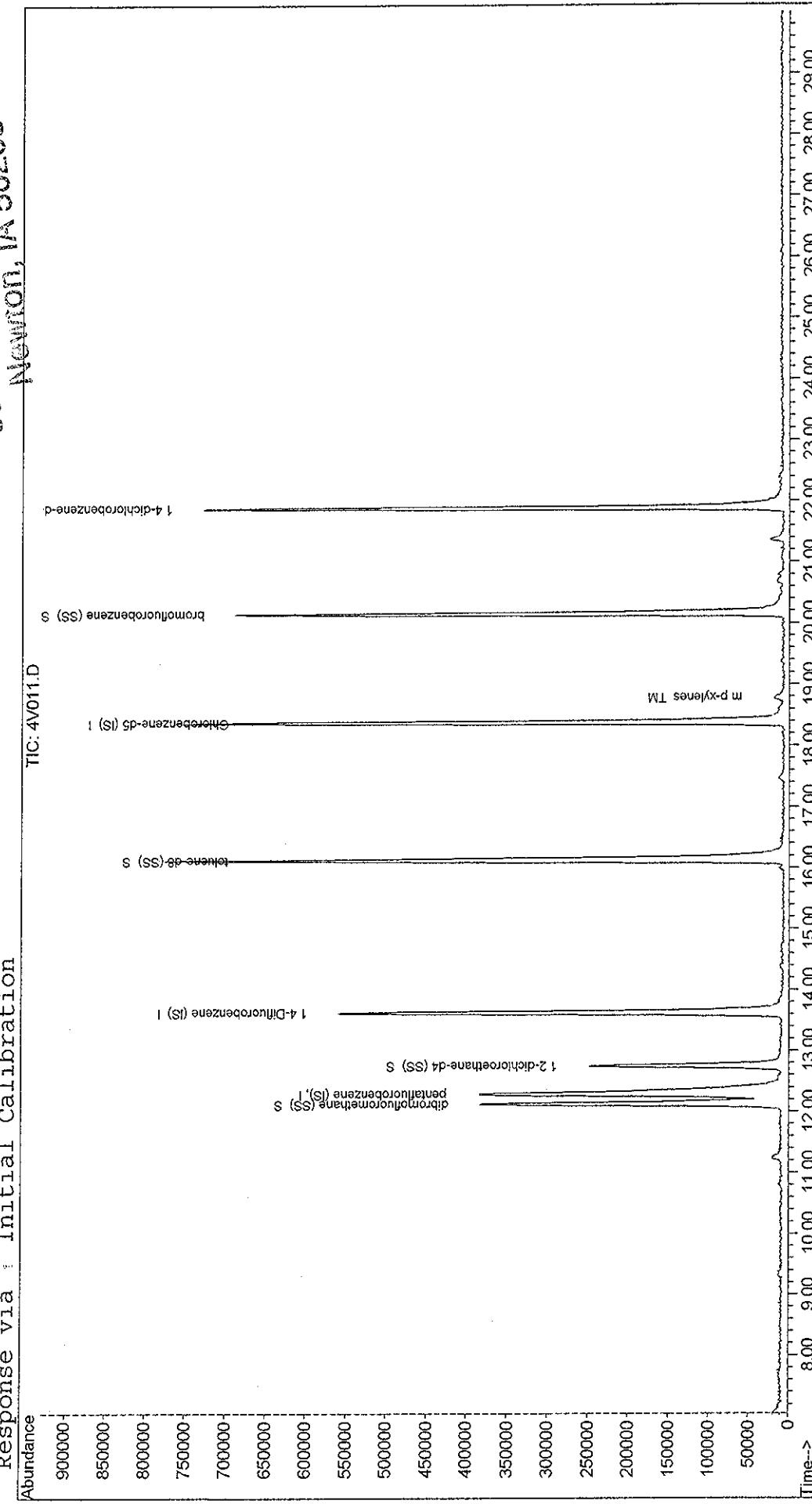
017F0201.DWADC1A





Data File : G:\MSCHEM\4\DATA\022504A4\4V011.D
Acq On : 25 Feb 2004 5:54 pm
Sample : 14B0844-01
Misc :
MS Integration Params: rteint.p
Quant Time: Feb 26 7:33 2004

Method : G:\MSCHEM\4\METHODS\BW020504.M (RTE Integrator)
Title : BTEx Water
Last Update : Thu Feb 05 14:28:54 2004
Response via : Initial Calibration



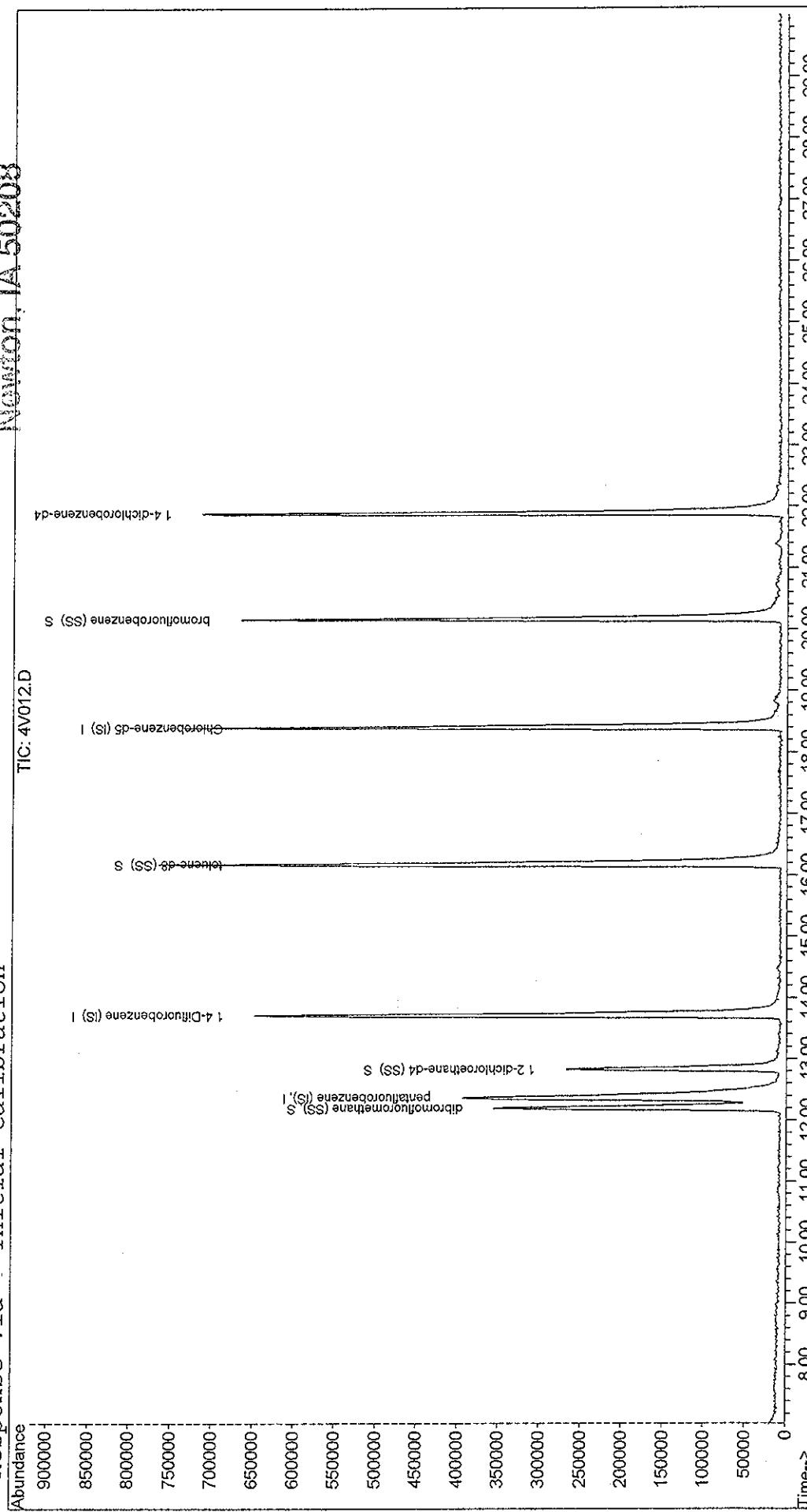
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Acq On : 25 Feb 2004 6:34 pm
Sample : 14B0844-02
Misc :

MS Integration Params: rteint.p
Quant Time: Feb 26 7:33 2004

Method : G:\MSCHEM\4\METHODS\BW020504.M (RTE Integrator)
Title : BTEX Water
Last Update : Thu Feb 05 14:28:54 2004
Response via : Initial Calibration

Quant Results File: BW020504.RES

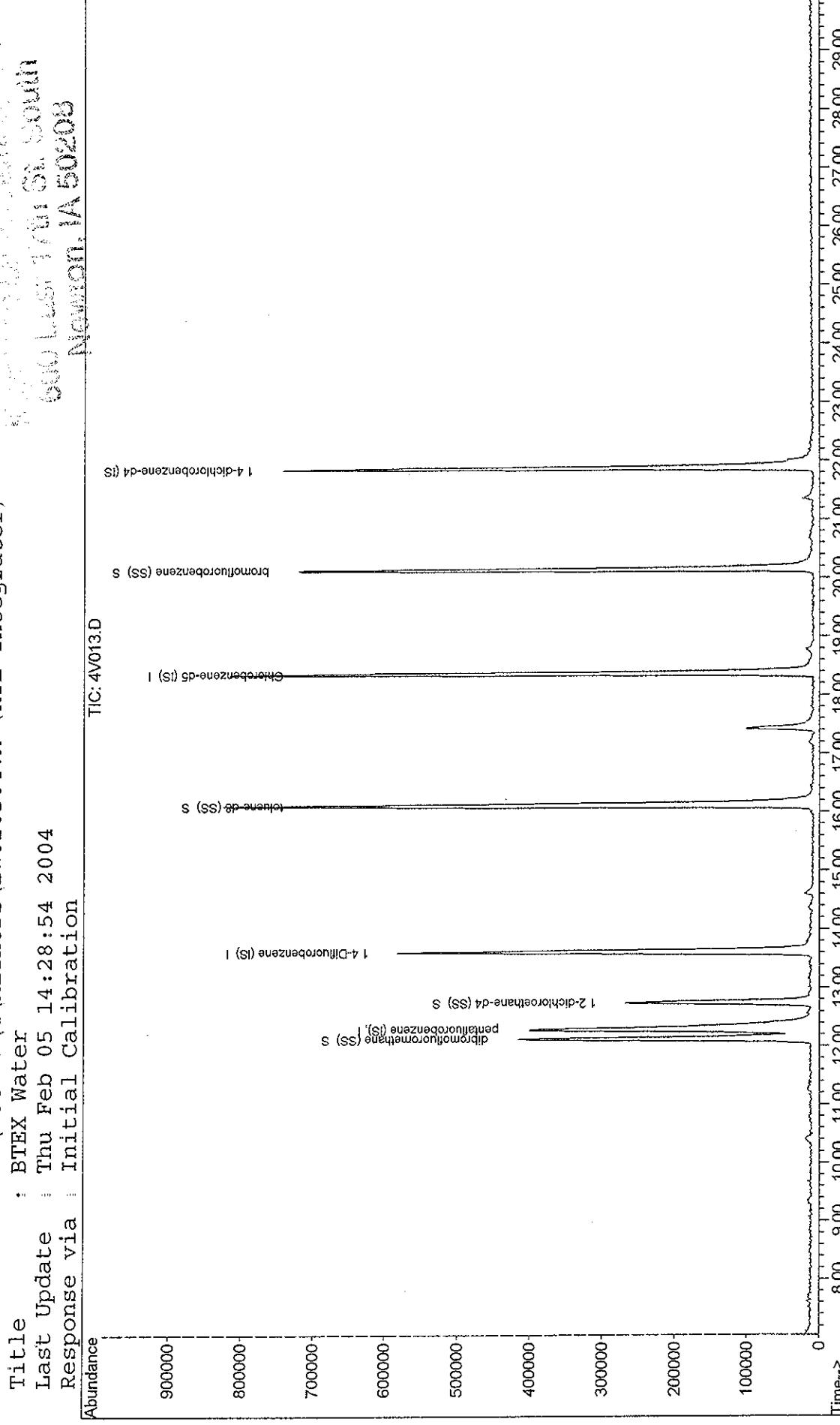
Vial: 12
Operator: JRF
Inst: MS #4
Multiplr: 1.00



Data File : G:\MSCHEM\4\DATA\022504A4\4V013.D
Acq On : 25 Feb 2004 7:13 pm
Sample : 14B0844-03
Misc :
MS Integration Params: rteint.p
Quant Time: Feb 26 7:36 2004

Method : G:\MSCHEM\4\METHODS\BW020504.M (RTE Integrator)
Title : BTEx Water
Last Update : Thu Feb 05 14:28:54 2004
Response via : Initial Calibration

Abundance



Accreditations:
Iowa DNR: 095
New Jersey DEP: IA001
Kansas DHE: E-10287

ANALYTICAL REPORT

March 05, 2004

Page 1 of 6

Work Order: 14B0826

Report To
Christy Jaworski Barker-Lemar Associates 1801 Industrial Circle Des Moines, IA 50315

Work Order Information
Date Received: 02/20/2004 11:18AM Collector: Can't read name. Phone: 515-256-8814 PO Number:

Project : USI-Iowa
Project Number: IADNR

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
14B0826-01 B-1 11-13'				Matrix:Soil		Collected: 02/18/04 00:00	
<i>Determination of Volatile Petroleum Hydrocarbons</i>							
Benzene	<0 005 mg/kg	0 005	1B42707	OA-1 (GC/MS)	TVK	02/26/04 22:26	
Toluene	<0 005 mg/kg	0 005	1B42707	OA-1 (GC/MS)	TVK	02/26/04 22:26	
Ethylbenzene	<0 005 mg/kg	0 005	1B42707	OA-1 (GC/MS)	TVK	02/26/04 22:26	
Xylenes, total	<0 010 mg/kg	0 010	1B42707	OA-1 (GC/MS)	TVK	02/26/04 22:26	
Methyl-t-butyl Ether (MTBE)	<0 010 mg/kg	0 010	1B42707	OA-1 (GC/MS)	TVK	02/26/04 22:26	
Di-iso-Propyl Ether (DIPE)	<0 010 mg/kg	0 010	1B42707	OA-1 (GC/MS)	TVK	02/26/04 22:26	
Ethyl-tert-Butyl Ether (ETBE)	<0 010 mg/kg	0 010	1B42707	OA-1 (GC/MS)	TVK	02/26/04 22:26	
tert-Amyl Methyl Ether (TAME)	<0 010 mg/kg	0 010	1B42707	OA-1 (GC/MS)	TVK	02/26/04 22:26	
tert-Butyl Alcohol (TBA)	<0 250 mg/kg	0 250	1B42707	OA-1 (GC/MS)	TVK	02/26/04 22:26	
Surrogate 4-Bromofluorobenzene	104 %			81-127	TVK	02/26/04 22:26	
<i>Determination of Extractable Petroleum Hydrocarbons</i>							
TEH, as gasoline	<5 mg/kg	5	1C40220	Iowa OA-2	SMG	03/03/04 19:49	
TEH, as #2 diesel fuel	<5 mg/kg	5	1C40220	Iowa OA-2	SMG	03/03/04 19:49	
TEH, as waste oil	6 mg/kg	5	1C40220	Iowa OA-2	SMG	03/03/04 19:49	D-06
Total Extractable Hydrocarbons	6 mg/kg	5	1C40220	Iowa OA-2	SMG	03/03/04 19:49	
Surrogate Pentacosane	99.2 %			60-140	SMG	03/03/04 19:49	

14B0826-02 B-2 3-5'				Matrix:Soil		Collected: 02/19/04 00:00
<i>Determination of Volatile Petroleum Hydrocarbons</i>						
Benzene	<0 005 mg/kg	0 005	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:06
Toluene	<0 005 mg/kg	0.005	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:06
Ethylbenzene	<0 005 mg/kg	0 005	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:06
Xylenes, total	<0 010 mg/kg	0 010	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:06
Methyl-t-butyl Ether (MIBE)	<0 010 mg/kg	0 010	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:06
Di-iso-Propyl Ether (DIPE)	<0 010 mg/kg	0 010	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:06
Ethyl-tert-Butyl Ether (ETBE)	<0 010 mg/kg	0 010	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:06
tert-Amyl Methyl Ether (TAME)	<0 010 mg/kg	0 010	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:06
tert-Butyl Alcohol (TBA)	<0 250 mg/kg	0 250	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:06
Surrogate 4-Bromofluorobenzene	106 %			81-127	TVK	02/26/04 23:06
<i>Determination of Extractable Petroleum Hydrocarbons</i>						
TEH, as gasoline	<5 mg/kg	5	1C40220	Iowa OA-2	SMG	03/03/04 20:38

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Des Moines, IA 50315

March 05, 2004

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Work Order: 14B0826

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
14B0826-02 B-2 3-5'				Matrix:Soil		Collected: 02/19/04 00:00	
<i>Determination of Extractable Petroleum Hydrocarbons</i>							
TEH, as #2 diesel fuel	<5 mg/kg	5	1C40220	Iowa OA-2	SMG	03/03/04 20:38	
IEH, as waste oil	14 mg/kg	5	1C40220	Iowa OA-2	SMG	03/03/04 20:38	D-06
Total Extractable Hydrocarbons	14 mg/kg	5	1C40220	Iowa OA-2	SMG	03/03/04 20:38	
Surrogate Pentacosane	80.7 %			60-140	SMG	03/03/04 20:38	
14B0826-03 B-3 11-13'				Matrix:Soil		Collected: 02/19/04 00:00	
<i>Determination of Volatile Petroleum Hydrocarbons</i>							
Benzene	<0.005 mg/kg	0.005	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:45	
Toluene	<0.005 mg/kg	0.005	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:45	
Ethylbenzene	<0.005 mg/kg	0.005	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:45	
Xylenes, total	<0.010 mg/kg	0.010	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:45	
Methyl-t-butyl Ether (MTBE)	<0.010 mg/kg	0.010	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:45	
Di-iso-Propyl Ether (DIPE)	<0.010 mg/kg	0.010	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:45	
Ethyl-tert-Butyl Ether (ETBE)	<0.010 mg/kg	0.010	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:45	
tert-Amyl Methyl Ether (TAME)	<0.010 mg/kg	0.010	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:45	
tert-Butyl Alcohol (IBA)	<0.250 mg/kg	0.250	1B42707	OA-1 (GC/MS)	TVK	02/26/04 23:45	
Surrogate 4-Bromofluorobenzene	106 %			8J-127	TVK	02/26/04 23:45	
<i>Determination of Extractable Petroleum Hydrocarbons</i>							
TEH, as gasoline	<5 mg/kg	5	1C40220	Iowa OA-2	SMG	03/03/04 21:27	
TEH, as #2 diesel fuel	<5 mg/kg	5	1C40220	Iowa OA-2	SMG	03/03/04 21:27	
IEH, as waste oil	5 mg/kg	5	1C40220	Iowa OA-2	SMG	03/03/04 21:27	D-06
Total Extractable Hydrocarbons	5 mg/kg	5	1C40220	Iowa OA-2	SMG	03/03/04 21:27	
Surrogate Pentacosane	77.8 %			60-140	SMG	03/03/04 21:27	

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MRL = Method Reporting Limit

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1801 Industrial Circle
Des Moines, IA 50315

March 05, 2004
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Work Order: 14B0826

Determination of Volatile Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Notes
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Batch 1B42707 - EPA 5030B

Blank (1B42707-BLK1) Prepared & Analyzed: 02/26/04

Benzene	ND	0.005	mg/kg							
Toluene	ND	0.005	"							
Ethylbenzene	ND	0.005	"							
Xylenes, total	ND	0.010	"							
Methyl-t-butyl Ether (MIBE)	ND	0.010	"							
Di-iso-Propyl Ether (DIPE)	ND	0.010	"							
Ethyl-tert-Butyl Ether (ETBE)	ND	0.010	"							
tert-Amyl Methyl Ether (TAME)	ND	0.010	"							
tert-Butyl Alcohol (TBA)	ND	0.250	"							

Surrogate 4-Bromofluorobenzene 51.07 " 50.00 102 81-127

LCS (1B42707-BS1) Prepared: 02/26/04 Analyzed: 02/27/04

Benzene	0.2660	0.005	mg/kg	0.2925	90.9	67-139
Toluene	0.2914	0.005	"	0.3125	93.2	63-139
Ethylbenzene	0.2529	0.005	"	0.2950	85.7	70-136
Xylenes, total	0.4718	0.010	"	0.5875	80.3	67-140
Methyl-t-butyl Ether (MIBE)	0.8170	0.010	"	0.7950	103	65-131

Surrogate 4-Bromofluorobenzene 51.01 " 50.00 102 81-127

Calibration Check (1B42707-CCV1) Prepared & Analyzed: 02/26/04

Benzene	0.4220	0.005	mg/kg	0.4050	104	70-130
Toluene	0.3916	0.005	"	0.3325	118	70-130
Ethylbenzene	0.3844	0.005	"	0.3475	111	70-130
Xylenes, total	0.8080	0.010	"	0.7725	105	70-130
Methyl-t-butyl Ether (MIBE)	0.3772	0.010	"	0.3425	110	70-130
Di-iso-Propyl Ether (DIPE)	0.3370	0.010	"	0.3150	107	70-130
Ethyl-tert-Butyl Ether (ETBE)	0.3637	0.010	"	0.3350	109	70-130
tert-Amyl Methyl Ether (TAME)	0.3713	0.010	"	0.2925	127	70-130
tert-Butyl Alcohol (TBA)	5.771	0.250	"	4.975	116	70-130

Surrogate 4-Bromofluorobenzene 52.34 " 50.00 105 81-127

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1801 Industrial Circle
Des Moines, IA 50315

March 05, 2004
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Work Order: 14B0826

Determination of Volatile Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1B42707 - EPA 5030B

Matrix Spike (1B42707-MS1) Source: 14B0994-01 Prepared: 02/26/04 Analyzed: 02/27/04

Benzene	0.2705	0.005	mg/kg	0.2812	ND	96.2	66-140		
Toluene	0.3041	0.005	"	0.3005	ND	101	66-132		
Ethylbenzene	0.2758	0.005	"	0.2837	ND	97.2	60-140		
Xylenes, total	0.5142	0.010	"	0.5649	ND	91.0	71-128		
Methyl-t-butyl Ether (MTBE)	0.7845	0.010	"	0.7644	ND	103	64-120		
Surrogate 4-Bromofluorobenzene	50.74		"	50.00		101	81-127		

Matrix Spike Dup (1B42707-MSD1) Source: 14B0994-01 Prepared: 02/26/04 Analyzed: 02/27/04

Benzene	0.2808	0.005	mg/kg	0.2925	ND	96.0	66-140	3.74	27
Toluene	0.3034	0.005	"	0.3125	ND	97.1	66-132	0.230	25
Ethylbenzene	0.2636	0.005	"	0.2950	ND	89.4	60-140	4.52	27
Xylenes, total	0.4937	0.010	"	0.5875	ND	84.0	71-128	4.07	25
Methyl-t-butyl Ether (MTBE)	0.8525	0.010	"	0.7950	ND	107	64-120	8.31	26
Surrogate 4-Bromofluorobenzene	50.31		"	50.00		101	81-127		

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1801 Industrial Circle
Des Moines, IA 50315

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Work Order: 14B0826

Determination of Extractable Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1C40220 - 3545 OA-2 PFE										
Blank (1C40220-BLK1)										
TEH, as gasoline	ND	5	mg/kg							
TEH, as #2 diesel fuel	ND	5	"							
TEH, as waste oil	ND	5	"							
Total Extractable Hydrocarbons	ND	5	"							
Surrogate Pentacosane	2.59	"		2.49		104	60-140			
LCS (1C40220-BS1)										
TEH, as #2 diesel fuel	470.3	5	mg/kg	500.2		94.0	61-110			
Surrogate Pentacosane	2.78	"		2.49		112	60-140			
Calibration Check (1C40220-CCV1)										
TEH, as gasoline	2202		mg/kg	2050		107	85-115			
TEH, as #2 diesel fuel	2182		"	2100		104	85-115			
TEH, as waste oil	1895		"	2030		93.3	85-115			
Surrogate Pentacosane	49.0	"		49.8		98.4	60-140			
Calibration Check (1C40220-CCV2)										
TEH, as gasoline	2211		mg/kg	2050		108	85-115			
TEH, as #2 diesel fuel	2264		"	2100		108	85-115			
TEH, as waste oil	1934		"	2030		95.3	85-115			
Surrogate Pentacosane	50.4	"		49.8		101	60-140			
Matrix Spike (1C40220-MS1)										
Source: 14B0826-01					Prepared: 03/02/04	Analyzed: 03/04/04				
TEH, as #2 diesel fuel	457.4	5	mg/kg	499.2	ND	91.6	51-110			
Surrogate Pentacosane	2.50	"		2.49		100	60-140			
Matrix Spike Dup (1C40220-MSD1)										
Source: 14B0826-01					Prepared: 03/02/04	Analyzed: 03/04/04				
TEH, as #2 diesel fuel	462.0	5	mg/kg	498.2	ND	92.7	51-110	1.00	1.8	
Surrogate Pentacosane	2.54	"		2.48		102	60-140			

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Barker-Lemar Associates
1801 Industrial Circle
Des Moines, IA 50315

March 05, 2004
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Work Order: 14B0826

Determination of Extractable Petroleum Hydrocarbons - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit	Notes
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Batch 1C40220 - 3545 OA-2 PFE

Reference (1C40220-SRM1)	Prepared: 03/02/04 Analyzed: 03/04/04					
TEH, as #2 diesel fuel	5374	100	mg/kg	4752	113	85-115
Surrogate Pentacosane	54.0	"		49.8	108	60-140

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

Notes and Definitions

D-06 The sample chromatographic pattern does not resemble the fuel standard used for quantitation

End of Report

Kathy Van Zee

Keystone Laboratories, Inc.
Kathy Van Zee For Jeffrey King, Ph.D.
Laboratory Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted.
MRI = Method Reporting Limit

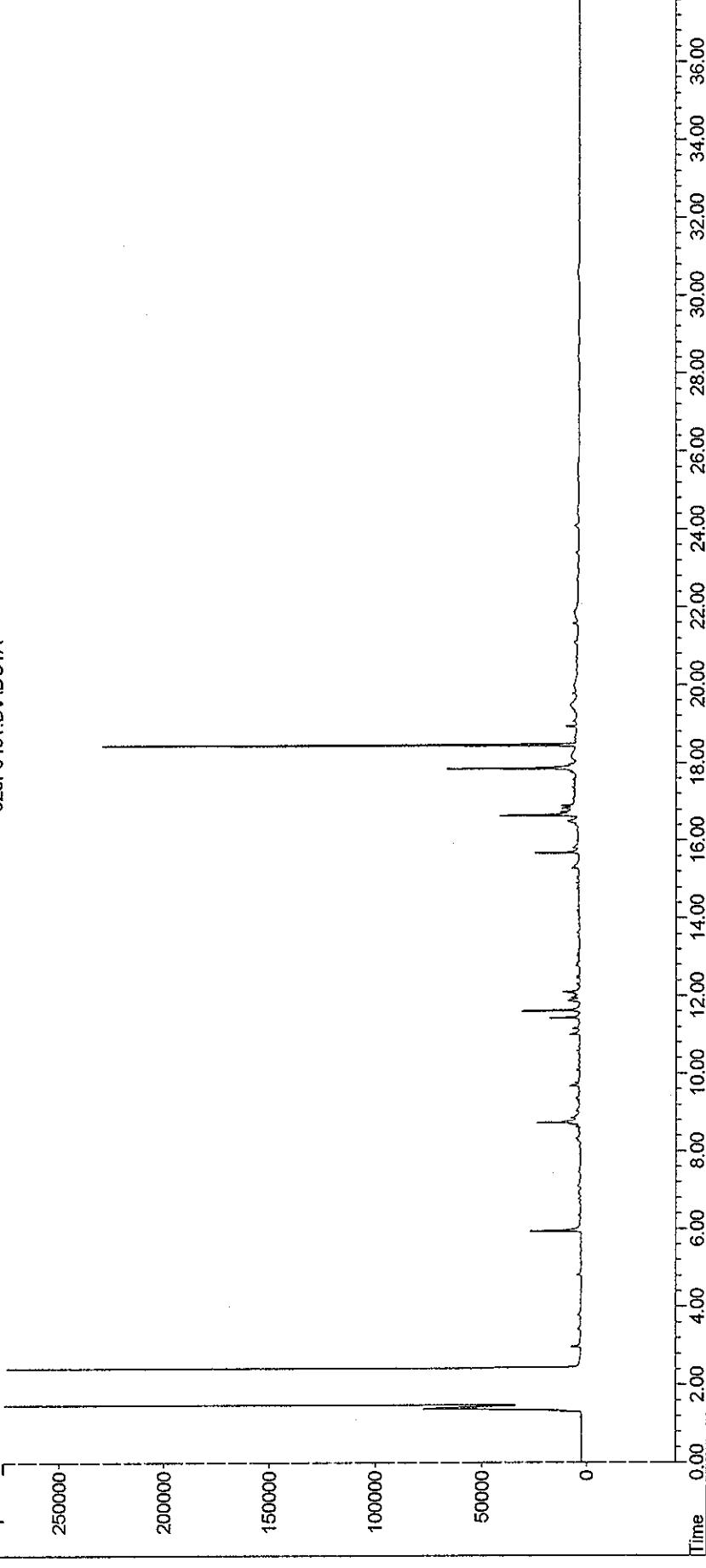
Data File : G:\HPCHEM\2\DATA\030304A2\020F0401.D
Acc On : 03 Mar 2004 07:49 PM
Sample : 14B0826-01
Misc :
IntFile : HYDRO.E

Quant Time: Mar 4 10:51 19104 Quant Results File: F022304.RES

Quant Method : G:\HPCHEM\2\METHODS\F022304.M (Chemstation Integrator)
Title : 8015-500/OA-2 Method
Last Update : Tue Feb 24 08:57:51 2004
Response via : Multiple Level Calibration
DataAcq Meth : DIESEL.MTH

Volume Inj. :
Signal Phase :
Signal Info :

Response



Data File : G:\HPCHEM\2\DATA\030304A2\021F0401.D Vial: 21
Acq On : 03 Mar 2004 08:38 PM Operator: SMG
Sample : 14B0826-02 Inst: GC #2
Misc : Multiplr: 1.00

IntFile : HYDRO.E

Quant Time: Mar 4 10:51 19104 Quant Results File: F022304.RES

Quant Method : G:\HPCHEM\2\METHODS\F022304.M (Chemstation Integrator)

Title : 8015-500/0A-2 Method

Last Update : Tue Feb 24 08:57:51 2004

Response via : Multiple Level Calibration

DataAcq Meth : DIESEL.MTH

Volume Inj.

Signal Phase

Signal Info :

Response

240000

220000

200000

180000

160000

140000

120000

100000

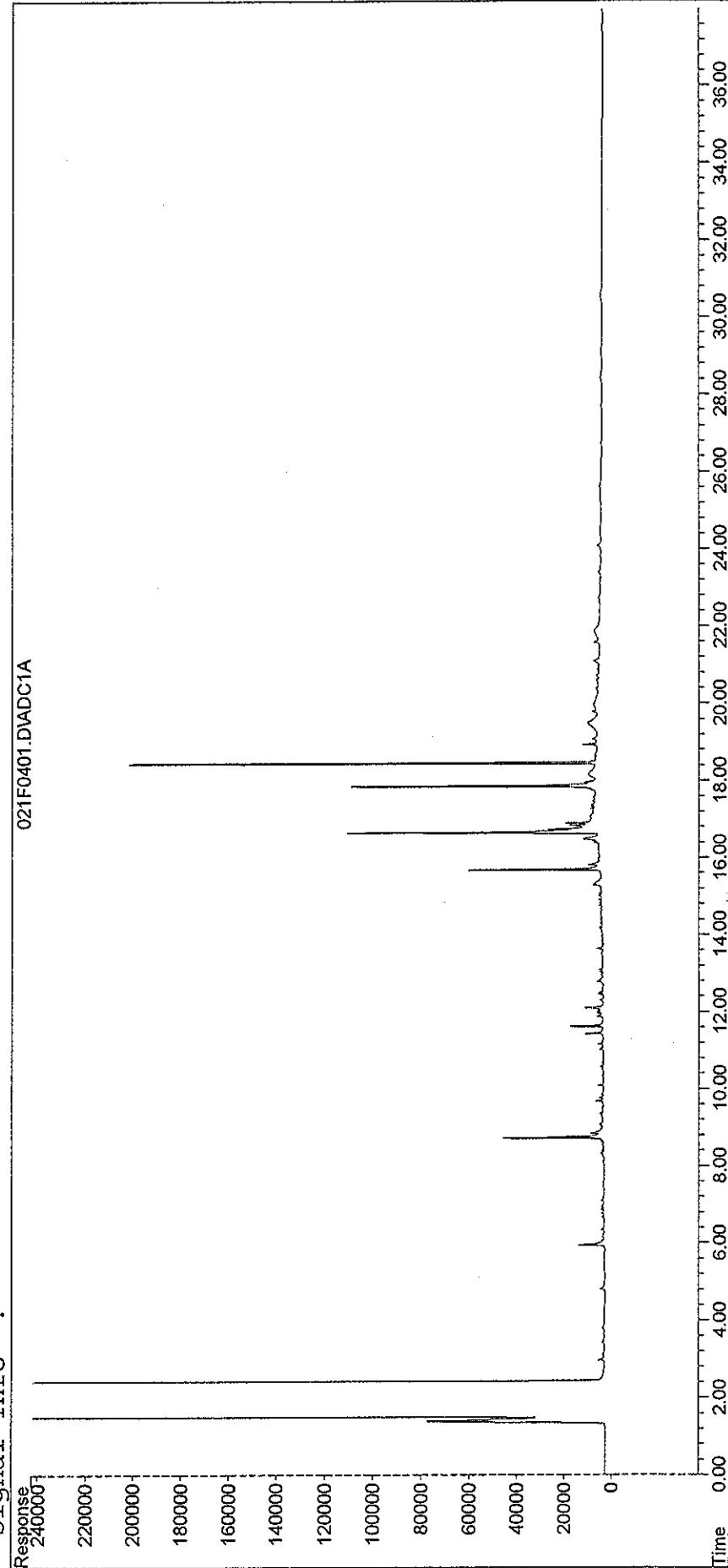
80000

60000

40000

20000

0



Data File : G:\HPCHEM\2\DATA\030304A2\022F0401.D Vial: 22
Acq On : 03 Mar 2004 09:27 PM Operator: SMG
Sample : 14B0826-03 Inst: GC #2
Misc : Multiplr: 1.00
IntFile : HYDRO.E

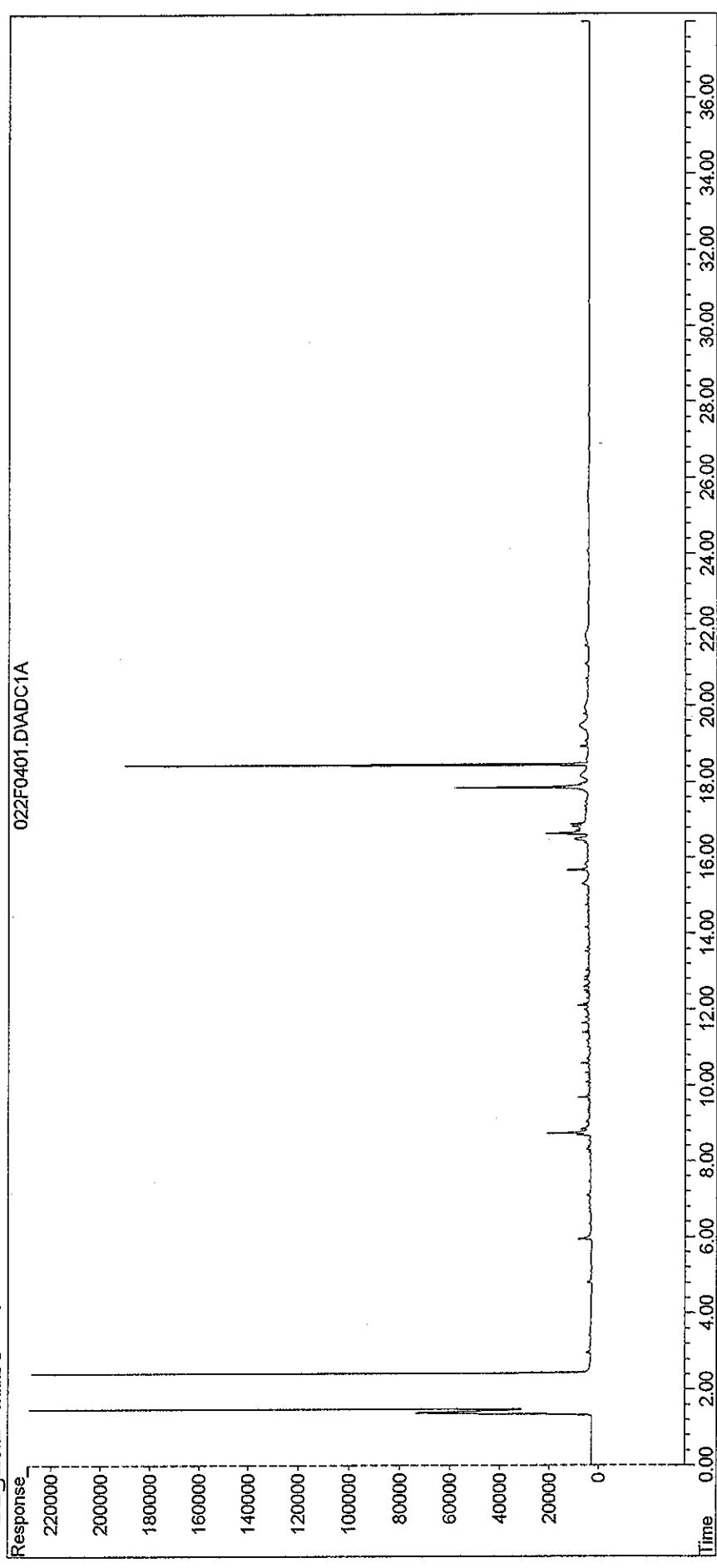
Quant Time: Mar 4 10:52 19104 Quant Results File: F022304.RES

Quant Method : G:\HPCHEM\2\METHODS\F022304.M (Chemstation Integrator)
Title : 8015-500/OA-2 Method
Last Update : Tue Feb 24 08:57:51 2004
Response via : Multiple Level Calibration
DataAcq Meth : DIESEL.MTH

Volume Inj. :

Signal Phase :

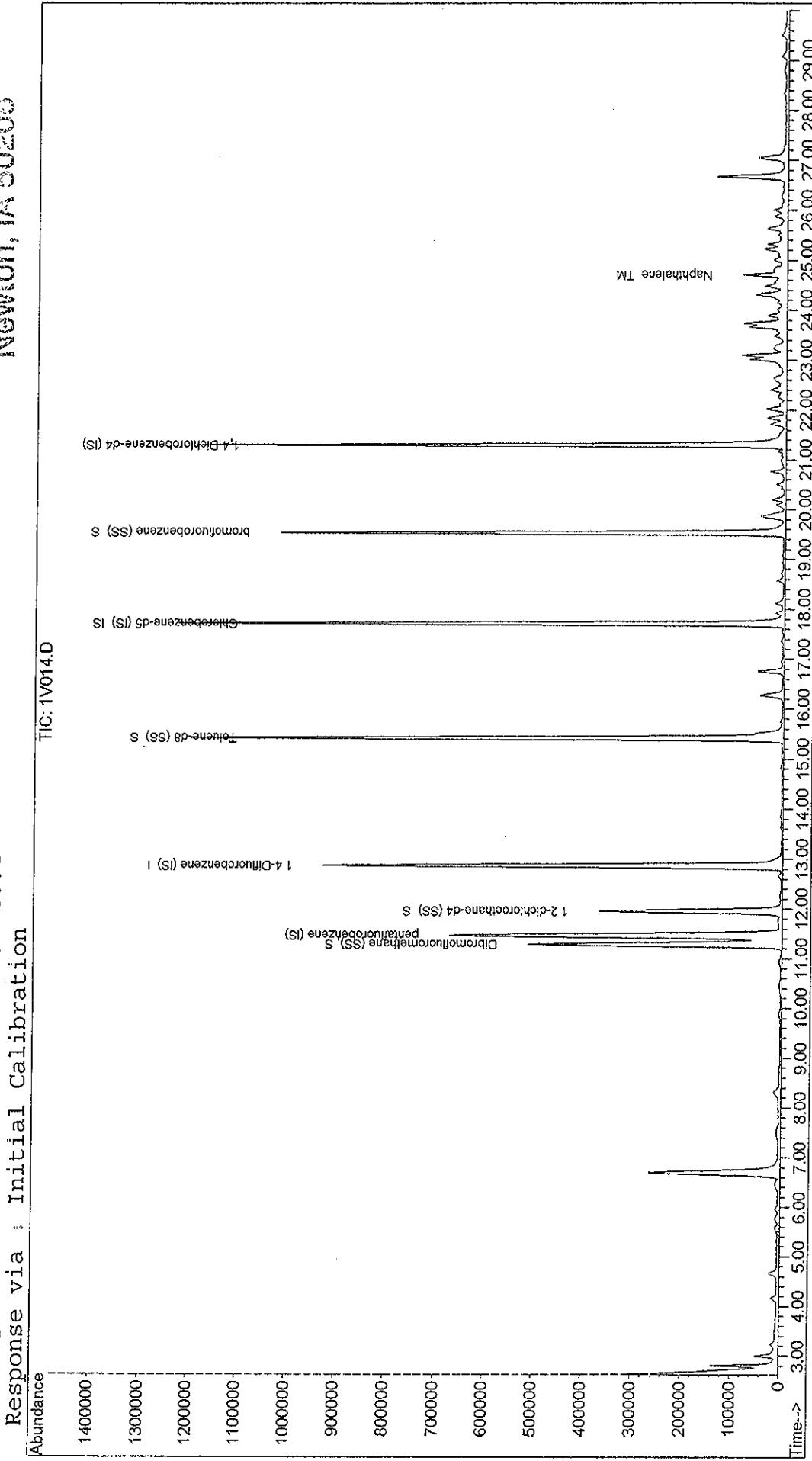
Signal Info :



Data File : G:\MSCHEM\1\DATA\022604A1\1V014.D
 Acq On : 26 Feb 2004 10:26 pm
 Sample : 14B0826-01
 Misc : *1.1 g
 MS Integration Params: rteint.p
 Quant Time: Feb 27 13:44 2004

Method : G:\MSCHEM\1\METHODS\BS022604.M (RTE Integrator)
 Title : OA-1 SOIL
 Last Update : Tue Jan 13 08:10:34 2004
 Response via : Initial Calibration

Quant Results File: BS022604.RES

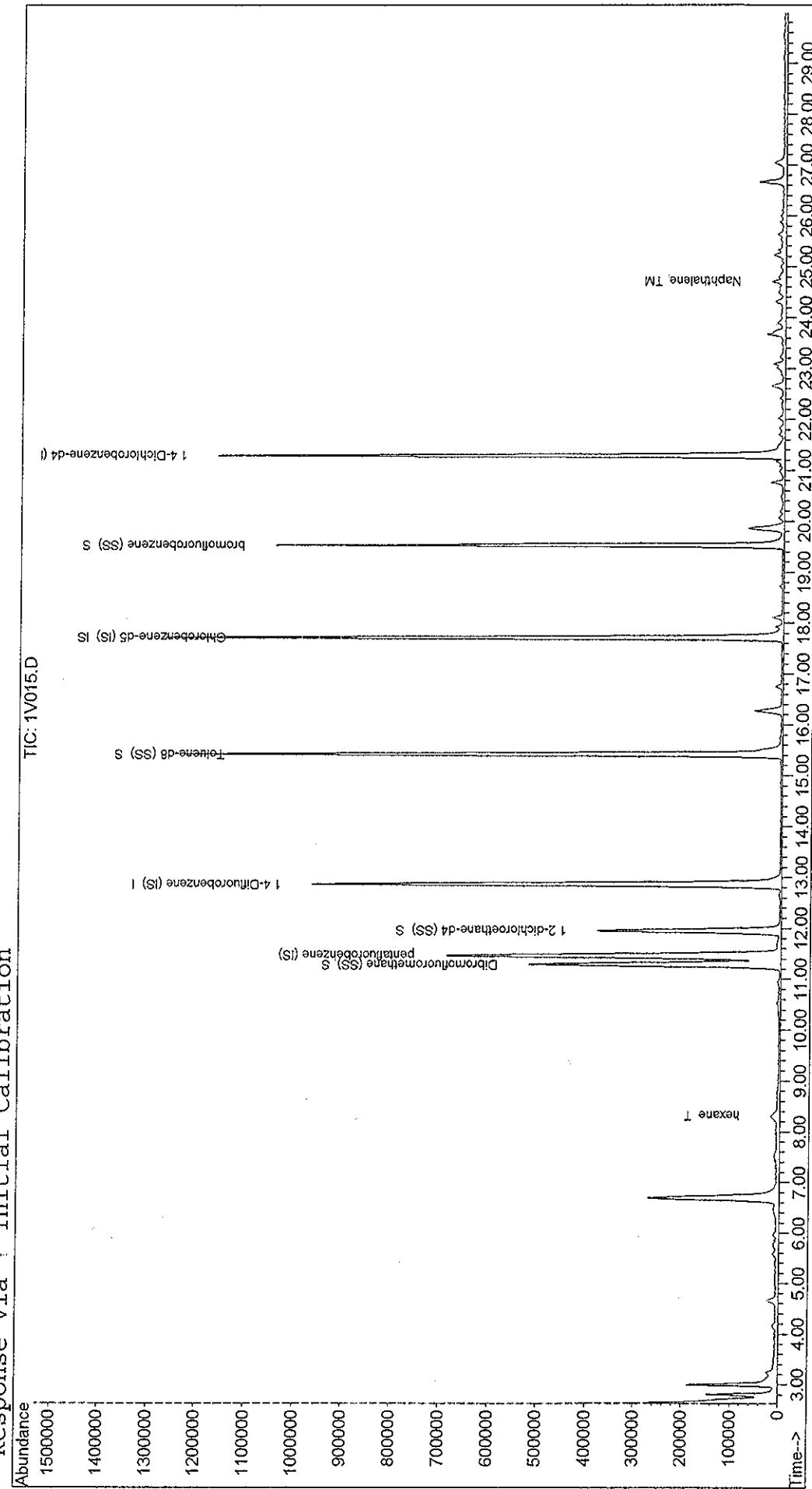


Data File : G:\MSCHEM\1\DATA\022604A1\1V015.D
 Acq On : 26 Feb 2004 11:06 pm
 Sample : 14B0826-02
 Misc : *1.03 g
 MS Integration Params: rteint.p
 Quant Time: Feb 27 13:45 2004

Vial: 15
 Operator: TVK
 Inst: MS #1
 Multiplr: 1.00

Method : G:\MSCHEM\1\METHODS\BS022604.M (RTE Integrator)
 Title : OA-1 SOIL
 Last Update : Tue Jan 13 08:10:34 2004
 Response via : Initial Calibration

Quant Results File: BS022604.RES
 Keystone Laboratories, Inc.
 600 East 17th St.
 Newark, NJ 07102

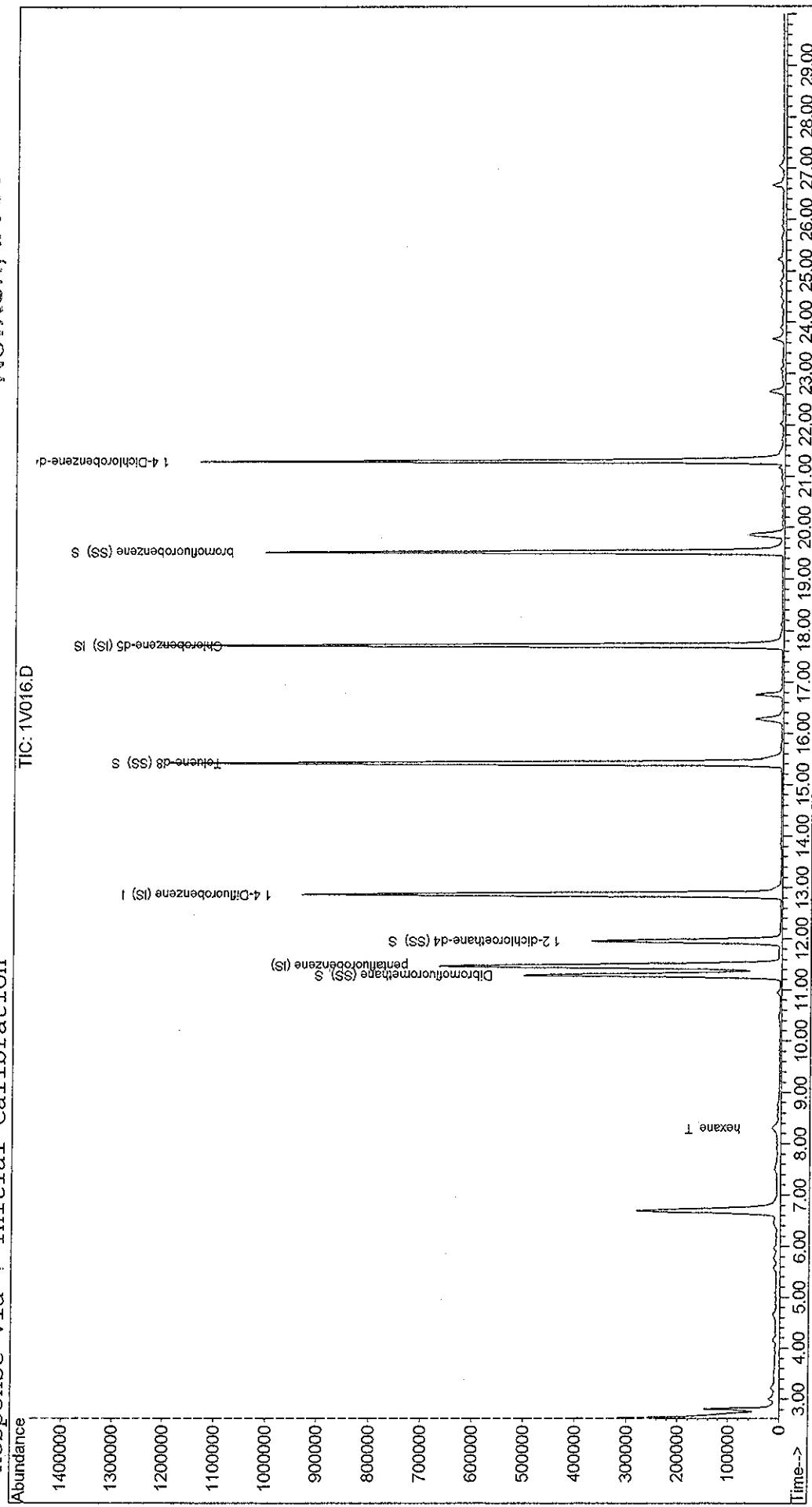


Data File : G:\MSCHEM\1\DATA\022604A1\1V016.D
Acq On : 26 Feb 2004 11:45 pm
Sample : 14B0826-03
Misc : *0.97 g
MS Integration Params: rteint.p
Quant Time: Feb 27 13:46 2004

Vial: 16
Operator: TVK
Inst: MS #1
Multiplr: 1.00

Quant Results File: BS022604.RES

Method : G:\MSCHEM\1\METHODS\BS022604.M (RTE Integrator)
Title : OA-1 SOIL
Last Update : Tue Jan 13 08:10:34 2004
Response via : Initial Calibration



Keystone

600 E. 17th St. S.
Newton, IA 50208
Phone: 641-792-8451
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3012 Ansborough Ave.
Waterloo, IA 50701
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Fax: 319-235-2480

1304 Adams
Kansas City, KS 66103
Phone: 913-321-7856
Fax: 913-321-7937

PAGE _____ OF _____

PRINT OR TYPE INFORMATION BELOW

SAMPLER: J. Wozniak

SITE NAME: ADMIR

ADDRESS: 101 Forest

CITY/ST/ZIP: Des Moines

PHONE: _____

FAX: _____

REPORT TO: NAME: <u>Benny J. Wozniak</u>	BILL TO: NAME: _____
COMPANY NAME: <u>Benny J. Wozniak</u>	COMPANY NAME: _____
ADDRESS: _____	ADDRESS: _____
CITY/ST/ZIP: _____	CITY/ST/ZIP: _____
PHONE: _____	PHONE: _____
FAX: _____	Keystone Quote No.: _____ (If Applicable)

LAB USE ONLY		LAB USE ONLY	
		LABORATORY WORK ORDER NO.	
		1410926	
CLIENT SAMPLE NUMBER	DATE	ANALYSES REQUIRED	
		MATRIX	NO. OF CONTAINERS
1904	2/18	B-1	1 SOIL 6 X TEN 3 SR-2
1904	2/19	B-2	3-5' 1 SOIL 6 X
1904	2/19	B-3	11-13' 1 SOIL 6 X
			X 100% LIQUID CS/DS
SAMPLE LOCATION		SAMPLE TEMPERATURE UPON RECEIPT:	
		°C	
GRAB/COMPOSITE		LABORATORY SAMPLE NUMBER	

Relinquished by: (Signature)	Date	Received by: (Signature)	Date	Turn-Around:
	Time		Time	□ Standard
<input type="checkbox"/>				<input type="checkbox"/> Rush
<input type="checkbox"/>				Contact Lab Prior to Submission
Relinquished by: (Signature)	Date	Received for Lab by: (Signature)	Date	Remarks:
			2/20/04	
			Time 11/18 AM	

Original - Return with Report • Yellow - Lab Copy • Pink - Sampler Copy
FORM: CCR 7-97